

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 25 June 2001 (25.06.01)	
International application No. PCT/EP00/09256	Applicant's or agent's file reference PF990063
International filing date (day/month/year) 20 September 2000 (20.09.00)	Priority date (day/month/year) 20 September 1999 (20.09.99)
Applicant STRAUB, Gilles et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 19 April 2001 (19.04.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Zakaria EL KHODARY Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

KOHRs, Martin
Thomson Multimedia
46, quai Alphonse Le Gallo
F-92648 Boulogne Cedex
FRANCE

Date of mailing (day/month/year) 19 November 2001 (19.11.01)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference PF990063	
International application No. PCT/EP00/09256	International filing date (day/month/year) 20 September 2000 (20.09.00)

1. The following indications appeared on record concerning:		
<input checked="" type="checkbox"/> the applicant	<input type="checkbox"/> the inventor	<input type="checkbox"/> the agent <input type="checkbox"/> the common representative
Name and Address THOMSON MULTIMEDIA 46, quai Alphonse Le Gallo F-92100 Boulogne-Billancourt France	State of Nationality FR	State of Residence FR
	Telephone No. 33 1 41 86 52 73	
	Facsimile No. 33 1 41 86 56 34	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input checked="" type="checkbox"/> the person	<input type="checkbox"/> the name	<input type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence
Name and Address THOMSON LICENSING S.A. 46, quai Alphonse Le Gallo F-92100 Boulogne-Billancourt France	State of Nationality FR	State of Residence FR
	Telephone No. 33 1 41 86 52 73	
	Facsimile No. 33 1 41 86 56 34	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer R. Raissi Telephone No.: (41-22) 338.83.38
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(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 March 2001 (29.03.2001)

PCT

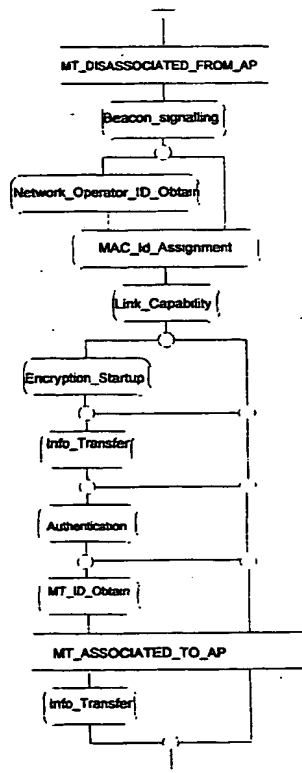
(10) International Publication Number
WO 01/22661 A2

- (51) International Patent Classification⁷: **H04L 12/28**
- (21) International Application Number: **PCT/EP00/09256**
- (22) International Filing Date:
20 September 2000 (20.09.2000)
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
99402299.4 20 September 1999 (20.09.1999) EP
99119430.9 30 September 1999 (30.09.1999) EP
- (71) Applicant (for all designated States except US): **THOMSON MULTIMEDIA [FR/FR]; 46, quai Alphonse Le Gallo, F-92100 Boulogne-Billancourt (FR).**
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **STRAUB, Gilles [FR/FR]; Thomson Multimedia, 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR). LAURENT, Christophe [FR/FR]; Thomson Multimedia, 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR). VINCENT, Christophe [FR/FR]; Thomson Multimedia, 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR). DURAND, Alain [FR/FR]; Thomson Multimedia, 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR).**
- (74) Agent: **KOHRs, Martin; Thomson Multimedia, 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR).**
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,**

[Continued on next page]

(54) Title: **METHOD FOR DEVICE REGISTRATION IN A WIRELESS HOME NETWORK**

MSC Association_new



(57) Abstract: The invention concerns a method for registering a device in a wireless network comprising a central access point. The method comprises the steps of: sending an identification code from the device to the access point; checking by said access point whether the received identification code corresponds to the identification code sent by said device and if such checking is positive, sending an authentication key from said access point to said device; storage of said authentication key by said device for use in authentication procedures between said device and said access point. The invention is applicable among others in digital home networks.

WO 01/22661 A2



NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— Without international search report and to be republished upon receipt of that report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

Published:

— with international search report

(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(88) **Date of publication of the international search report:**

11 October 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PF990063	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 00/ 09256	International filing date (day/month/year) 20/09/2000	(Earliest) Priority Date (day/month/year) 20/09/1999
Applicant THOMSON MULTIMEDIA et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

2

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/09256

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H04L29/06 H04L12/28 H04L9/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L H04Q G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	EP 0 944 203 A (NOKIA MOBILE PHONES LTD) 22 September 1999 (1999-09-22) page 3, column 4, line 22 -page 5, column 7, line 49; claim 1	1-5
X	& FI 980 291 A (NOKIA MOBILE PHONES LTD) 10 August 1999 (1999-08-10) the whole document	1-5
A	EP 0 658 021 A (IBM) 14 June 1995 (1995-06-14) abstract page 2, column 1, line 10 - line 50 page 3, column 4, line 24 -page 4, column 5, line 56 claims 1-6	1-5

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

* & * document member of the same patent family

Date of the actual completion of the international search

27 March 2001

Date of mailing of the international search report

02/04/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Karavassilis, N

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/09256

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 077 790 A (SHARP RONALD E ET AL) 31 December 1991 (1991-12-31) abstract column 3, line 4 -column 4, line 3 claims 1-4 -----	1-5

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/09256

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0944203	A	22-09-1999	FI 980291 A	10-08-1999
EP 0658021	A	14-06-1995	CA 2130396 A,C	09-06-1995
			JP 2568054 B	25-12-1996
			JP 7202883 A	04-08-1995
			US 5539824 A	23-07-1996
US 5077790	A	31-12-1991	AT 173119 T	15-11-1998
			AU 8769091 A	17-08-1992
			BR 9106726 A	29-06-1993
			CA 2087841 A,C	01-07-1992
			DE 69130458 D	10-12-1998
			EP 0565528 A	20-10-1993
			FI 930307 A	26-01-1993
			JP 2546756 B	23-10-1996
			JP 6505837 T	30-06-1994
			KR 9600935 B	15-01-1996
			WO 9212584 A	23-07-1992
			AU 649742 B	02-06-1994
			NO 930352 A	02-02-1993

PATENT COOPERATION TREATY

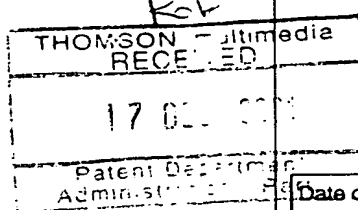
EXPRESS MAIL EV025962804US

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

KOHR, Martin
THOMSON MULTIMEDIA
46 Quai Alphonse Le Gallo
92648 BOULOGNE Cedex
FRANCE



NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year) 13.12.2001

Applicant's or agent's file reference
PF990063

IMPORTANT NOTIFICATION

International application No.
PCT/EP00/09256

International filing date (day/month/year)
20/09/2000

Priority date (day/month/year)
20/09/1999

Applicant
THOMSON MULTIMEDIA et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

 European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

Barrio Baranano, A

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PATENT COOPERATION TREATY



PCT

17 DEC 2001

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

12

Applicant's or agent's file reference PF990063		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP00/09256	International filing date (day/month/year) 20/09/2000	Priority date (day/month/year) 20/09/1999	
International Patent Classification (IPC) or national classification and IPC H04L29/06			
Applicant THOMSON MULTIMEDIA et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application 			
Date of submission of the demand 19/04/2001		Date of completion of this report 13.12.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer Hamer, J Telephone No. +49 89 2399 8827 	

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP00/09256

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-14 as originally filed

Claims, No.:

1-5 as originally filed

Drawings, sheets:

1/6-6/6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/09256

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-5
	No: Claims
Inventive step (IS)	Yes: Claims
	No: Claims 1-5
Industrial applicability (IA)	Yes: Claims 1-5
	No: Claims

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

V- Reasoned Statement

1. The following documents are cited:

D1: EP-A-0 944 203 (NOKIA MOBILE PHONES LTD) 22 September 1999 (1999-09-22) & FI 980 291 A (NOKIA MOBILE PHONES LTD) 10 August 1999 (1999-08-10). The EP version is used here as a translation of the FI document.

D2: EP-A-0 658 021 (IBM) 14 June 1995 (1995-06-14)

D3: US-A-5 077 790 (SHARP RONALD E ET AL) 31 December 1991 (1991-12-31)

2. Claim 1

The subject-matter of claim 1 of the present invention is concerned with a method for registering a device in a wireless network comprising a central access point. In claim 1, the registration begins by the device sending an identification code to the access point. If this code is recognised by the access point, an authentication key is sent from the access point to the device.

In wireless systems, it is well known in the art that a new device in the network must go through a registration process. An example of this can be found in D3 (see claim 1, col 5, lines 23 to 27 of D3) where the new device sends a link identification number to the base station for over the air registration. This is checked in a data base (col 5, lines 33 to 38). Once registration has taken place, the access point sends to the device an authentication key (encrypted subscriber identification number) (see col. 5, lines 46 to 47). This key is stored and used for further authentication procedures (see claim 2 of D3).

The transmission of an authentication key is also known from D1 (see claim 1 of the EP version of D1, column 8, lines 42 to 45). A key is sent from the access point (remote station) to the device (mobile host) where it is stored and used in authentication procedures.

As both registration and the transmission of an authentication key are known from the prior art to be necessary steps in operating a wireless network, and as

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/09256

both of these features are already known in the prior art, a skilled person would need no inventive skill to place them together and to arrive at the subject-matter of claim 1. Thus, claim 1 does not involve an inventive step and does not meet the requirements of Article 33(3) PCT.

3. Dependent claims 2 to 5 are not appended to an independent claim which meets the requirements of Article 33(3) PCT. Furthermore, their subject-matter does not appear to contain anything of inventive significance which added to that of claim 1 would provide an inventive step. No features are disclosed which are not either already known from the prior art or which are not obvious to a person skilled in the art of wireless networks.

VII- Certain Defects

The following deficiencies are found in the application:

- a) The claims do not meet the requirements of Rule 6.2(b) PCT in that they do not contain reference signs.
- b) The documents cited in the International Search Report listed above should have been referenced and briefly discussed in the description, Rule 5.1(a)(ii), PCT.